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CASE STUDY

New Method Improves TB Detection

Quality assessment for smear microscopy improved the detection of TB



Maya Kusemisova is applying the new method at her laboratory in Taldy Krogan, Kazakhstan. Photo: Project HOPE

"The new method, introduced by USAID and Project HOPE, has enabled us to significantly increase the quality of TB diagnostics. This means that we find more contagious TB patients and start to treat them earlier than before."

Maya Kusemisova, Laboratory Coordinator of Almaty Oblast

Challenge

Errors of smear microscopy is one of the reasons for late detection of tuberculosis (TB), a disease with a dangerously high incidence rate not only in Kazakhstan but all over the former Soviet Union. Until recently, laboratories across the country used an obsolete method for quality assurance of smear microscopy. The method failed to provide the specialists with reliable information or facilitate quality improvements. The quality of TB diagnostics was poor and hindered the implementation of Kazakhstan's national TB control strategy.

Initiative

In 2006 USAID and Project HOPE launched a pilot initiative to improve the quality of TB diagnostics in Almaty Oblast laboratories. They introduced the method of blinded rechecking of slides in two primary health care laboratories and the Almaty Oblast TB Dispensary laboratory. Together with the National Reference Laboratory team, USAID and Project HOPE prepared an external quality assessment protocol and trained 14 laboratory specialists in this new method. With USAID funding, laboratories received slides, slide storage boxes, and other supplies for the diagnostics, and Project HOPE specialists monitored the use of the new method on a monthly basis.

Result

"After just one year of the implementation of the new method, the quality of TB diagnostics has significantly increased," says Laboratory Coordinator of Almaty Oblast Maya Kusemisova. She explains that before, laboratory coordinators paid equal attention to all laboratories, regardless of their performance. Using the new quality assurance method, they are able to identify the laboratories with low quality of smear microscopy and work with them to improve diagnostics. "The quality of smear preparation improved and the proportions of suspects with a positive smear increased from 18% to 23% in the TB laboratory, and from 3,7% to 7,4% and from 2,9% to 4,4% in two PHC laboratories," says doctor Kusemisova. "This means that we identified more contagious TB patients and started to treat them earlier than before." Due to the impressive results, the Almaty Oblast health department is planning to introduce the blinded rechecking method in all the laboratories across the oblast.